

Table I

Hemostatic Proteins Associated with Venous Thrombosis

Antithrombin III	Protein S
Factor V	Protein C
Factor XII	Thrombin
Fibrinogen	Thrombomodulin
Heparin Cofactor II	
Plasminogen	

Over 400 different DNA alterations have been found in genes that encode for these proteins ()

Table II

Terms Frequently Used in Reference to Activated Protein C-Resistance

FV Leiden:	Most commonly used term for the DNA mutation responsible for 90-95% of APC-R cases
FV Q506R:	An amino acid substitution at codon 506 in factor V
FV 1691G->A:	Nucleotide substitution at position 1691 in factor V
APC-R:	Clinical expression for this procoagulant abnormality
APC-R SR	Refers to the sensitivity ratio of the plasma based coagulation based assay

Table III

Population Frequency of FV Leiden

U.S. Caucasians	5.7%
African Americans	1.2%
Hispanic Americans	2.2%
Asia Americans	0.45%
Native Americans	1.25%
United Kingdom	4.4%
Greek Cypriots	7.0%

Table IV

Factors that Synerize with FV Leiden to Increase Thrombotic Risk

Genetic:	Protein C deficiency
	Protein S deficiency
	Antithrombin III deficiency
	Prothrombin 20210 G->A *
	Methylenetetrahydrofolate Reductase (MTHFR)
Non-Genetic Factors:	Pregnancy
	Oral Contraceptives
	Surgery
	Immobilization

Table V

Risk for Thrombosis

<u>Circumstance</u>	<u>Genotype</u>	Homozygous
	Heterozygous	
APC-R	5-10 fold increase in risk	50-100-fold increase in risk
Oral Contraceptives	34-fold increase in risk	200-400-fold increase in risk
Pregnancy ¹	1 out of 400	
Hyperhomocysteinemia ¹	20-fold increase in risk	

¹ Degree of increased risk has yet to be separately determined for heterozygotes and homozygotes.